

AD \_\_\_\_\_

Award Number: DAMD17-00-1-0723

TITLE: Washington Area Computer Aided Surgery (WashCAS)  
Monthly Meetings

PRINCIPAL INVESTIGATOR: Kevin R. Cleary, Ph.D.

CONTRACTING ORGANIZATION: Georgetown University  
Washington, D.C. 20007

REPORT DATE: September 2003

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;  
Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

20030923 041

**REPORT DOCUMENTATION PAGE**Form Approved  
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

**1. AGENCY USE ONLY**  
(Leave blank)**2. REPORT DATE**  
September 2003**3. REPORT TYPE AND DATES COVERED**  
Annual (1 Oct 2000 - 30 Sep 2003)**4. TITLE AND SUBTITLE**Washington Area Computer Aided Surgery (WashCAS)  
Monthly Meetings**5. FUNDING NUMBERS**

DAMD17-00-1-0723

**6. AUTHOR(S)**

Kevin R. Cleary, Ph.D.

**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)**Georgetown University  
Washington, D.C. 20007

E-Mail: cleary@georgetown.edu

**8. PERFORMING ORGANIZATION  
REPORT NUMBER****9. SPONSORING / MONITORING  
AGENCY NAME(S) AND ADDRESS(ES)**U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012**10. SPONSORING / MONITORING  
AGENCY REPORT NUMBER****11. SUPPLEMENTARY NOTES****12a. DISTRIBUTION / AVAILABILITY STATEMENT**

Approved for Public Release; Distribution Unlimited

**12b. DISTRIBUTION CODE****13. ABSTRACT (Maximum 200 Words)**

Since its inception in 1999, the Washington, D.C., Area Computer-Aided Surgery Society (WashCAS) has become the major vehicle in the Washington/Baltimore area for exploring the issues in the emerging field of computer aided surgery and related technologies.

Key accomplishments of the society to date are:

- Has held meetings every other month since 1999, featuring many of the nation's leading experts on computer aided surgery and related topics.
- Has brought together representatives from local funding agencies and universities including NIH, NSF, NRL, the Navy Medical Center, Walter Reed, and Fort Detrick. Participating universities have included Georgetown, George Washington, George Mason, Catholic, and Johns Hopkins, among others.
- While the great majority of the meetings have been held at the National Library of Medicine, we have also held meetings at Georgetown, George Washington, and the University of Maryland.
- Established a web site ([www.washcas.org](http://www.washcas.org)) to disseminate information, including abstracts of all the talks to date and links to local research groups.

**14. SUBJECT TERMS**

Computer aided surgery, societies, organizations

**15. NUMBER OF PAGES**

6

**16. PRICE CODE****17. SECURITY CLASSIFICATION  
OF REPORT**

Unclassified

**18. SECURITY CLASSIFICATION  
OF THIS PAGE**

Unclassified

**19. SECURITY CLASSIFICATION  
OF ABSTRACT**

Unclassified

**20. LIMITATION OF ABSTRACT**

Unlimited

### 3 Table of Contents

1	Front Cover .....	1
2	Standard Form (SF) 298 .....	2
3	Table of Contents .....	3
4	Introduction .....	4
5	Report Body .....	4
6	Key Research Outcomes .....	5
7	Reportable Outcomes .....	6
8	Conclusions .....	6

## 4 Introduction

The Washington, D.C., Area Computer-Aided Surgery Society (**WashCAS**) has become the major vehicle in the Washington/Baltimore area for exploring the issues in the emerging field of computer aided surgery and related technologies. The society is intended to bring together physicians, scientists, and engineers to discuss computer applications in surgery, including image-guided surgery, medical robotics, medical imaging, surgical simulation, teleradiology, and other related topics. Meetings with keynote speakers are held every other month.

The Society was founded in the summer of 1999 and has held 21 meetings to date, with an average of 40 attendees at each meeting. Attendees have included representatives from university, commercial, and government entities (including USUHS, MRMC, WRAMC, NIH, FDA, and NLM). Since the fall of 2000, the society has been funded by the Telemedicine and Advanced Technology Research Center (TATRC) of the U.S. Army Medical Research and Materiel Command (USAMRMC). This funding has allowed us to recruit internationally known speakers as well as provide food before the meetings (an essential element since most people come directly from the office for the 7 pm talks).

The vast majority of the meetings have been held at the National Library of Medicine (NLM) on the NIH main campus. NLM has a first-class conference room at the Lister Hill Center. These facilities have been made available to us at no charge and this has enabled us to spread out our initial funding for several years. The primary source of society information is the website at [www.washcas.org](http://www.washcas.org). The society is run by volunteers, and no salary support has been charged to the grant. In short, we believe the government has received excellent value for the funds expended.

The society organizers are:

- President: James Burgess, MD, Inova Fairfax Hospital
- Treasurer: Gerry Higgins, PhD, Simquest
- Secretary: Kevin Cleary, PhD, Georgetown University
- Local host: Terry Yoo, PhD, National Library of Medicine

## 5 Report Body

This report covers the period from 01 October 2000 to 30 September 2003. The award number is DAMD17-00-1-0723.

As stated in the reporting requirements on the USAMRMC web site, the report body is to “describe the research accomplishments associated with each task in the statement of work”. Since this award is to support the WashCAS meetings, there are no research accomplishments to report. Instead, in this section, we provide a list of the meetings to date in Table 1.

**Table 1. WashCAS Seminar Speakers**

<b>Date</b>	<b>Speaker</b>	<b>Title</b>
29 July 2003	Pierre Vieyres	Mobile Tele-Echography using an Ultra-Light Robot
20 May 2003	Peter Basser	Diffusion Tensor Imaging
21 Jan 2003	Kenneth Salisbury	Enhancing Surgery Through Robotics and Automation
19 Nov 2002	Carl Jaffe	Frontiers in Vascular Imaging
17 Sept 2002	Mandayam Srinivasan	Haptics and Surgical Simulation
16 Apr 2002	Michael Ackerman Brett Peterson	Health Information and the Next Generation Internet Network Enhanced Collaboration in Biomedical Technology Centers
19 Feb 2002	Allison M. Okamura	Vision Assisted Control for Manipulation
11 Dec 2001	Lawrence J. Hettinger	Human Performance Considerations in Medical Systems
23 Oct 2001	King Li	Biomedical Imaging in the New Millennium
17 July 2001	Robert Galloway Jr.	Advances in Technology-Guided Therapy at Vanderbilt
15 May 2001	Elizabeth Bullitt	Patient-Specific Vascular Models for Surgical Applications
20 Mar 2001	Charles Richardson	Fused Deposition Modeling for Surgical Support
16 Jan 2001	Michael Miller	Computational Anatomy
14 Nov 2000	James Duncan	Use of Geometrical and Physical Models in Image Analysis
19 Sept 2000	Ron Kikinis	Surgical Planning Laboratory
18 July 2000	Richard Swaja	Bioengineering, Bioimaging, and Bioinformatics at the NIH
30 May 2000	Larry Clarke	New Resources Within NIH/NCI for Imaging Technology
28 Mar 2000	Brian Athey	Visualization & Manipulation of Visible Human Datasets
18 Jan 2000	Richard Bucholz	Computer Aided Surgery to Information Guided Therapy
16 Nov 1999	Clay Easterly	The Virtual Human Initiative
13 Sept 1999	Russell Taylor	Computer-Integrated Surgery

## 6 Key Research Outcomes

This section is intended to provide a bulleted list of key research accomplishments. Since this is not a research grant, instead we list some of the accomplishments of the WashCAS organization.

- Has held meetings every other month since 1999, featuring many of the nation's leading experts on computer aided surgery and related topics.
- Has brought together representatives from local funding agencies and universities including NIH, NSF, NRL, the Navy Medical Center, Walter Reed, and Fort Detrick. Participating universities have included Georgetown University, George

Washington University, George Mason University, Catholic University, and Johns Hopkins University, among others.

- While the great majority of the meetings have been held at the National Library of Medicine, we have also held meetings at Georgetown University, George Washington University, and the University of Maryland.
- Established a web site ([www.washcas.org](http://www.washcas.org)) to disseminate information, including abstracts of all the talks to date and links to local research groups.

## 7 Reportable Outcomes

This section provides a list of reportable outcomes.

The major reportable outcome is the archive of WashCAS talks over the past three years. This are listed on the WashCAS web site at:

<http://www.washcas.org/events.html>

Many of the talks have been recorded by the National Library of Medicine and are available on their web site at:

<http://collab.nlm.nih.gov/webcastsandvideos/washcas/washcas.html>

## 8 Conclusions

The Washington Area Computer Aided Surgery Society (WashCAS) has become the major vehicle for interaction among researchers in this field and related fields in the Washington-Baltimore area. This would not have been possible without the funding provided by this award. The society has held meetings every other month since 1999, with an average attendance of 40 people. Based on input from the participants, the organizers plan to continue in this manner, and welcome suggestions from all concerned parties as to how the society can best achieve its mission to promote the field.